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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,382	03/13/2001	Isamu Namose	15.38/5796	1529

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EXAMINER

HASSANZADEH, PARVIZ

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 05/30/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,382

Applicant(s)

NAMOSE, ISAMU

Examiner

Parviz Hassanzadeh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 4-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, method claims 1-3, in Paper No. 8 is acknowledged.

Claims 4-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected apparatus, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 8.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 3/13/00. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Specification

The abstract of the disclosure is objected to because on page 2, line 23, it is suggested to insert "2" before " F_2 " in order to balance the equation. Correction is required. See MPEP § 608.01(b).

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "48" on page 13, lines 7 and 19. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Figure 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claim 1, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 3 is rejected under 35 U.S.C. 102(a) as being anticipated by Rostaing et al (US Patent No. 5,965,786).

Rostaing et al teach an apparatus and a method of using the same, wherein used PFC from a low pressure processing chamber is brought into an atmospheric pressure through a vacuum pump, then a reactive element including oxygen (O₂) is added to the PFC gas into an

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plasma tube 16 wherein an atmospheric-pressure gas plasma is formed in order to decompose the PFC (abstract and column 10, line 58 through column 11, line 10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted

Prior Art (Fig. 4.1 and 4.2, pages 1-3).

Admitted prior art (Fig. 4.2) teaches an apparatus and a method of using the same, wherein used PFC from a low pressure processing chamber 2 is brought into an atmospheric pressure through a vacuum pump 6, then oxygen (O₂) is added to the PFC gas into an incinerator chamber 7 to decompose the PFC.

The admitted prior art Fig. 4.2 fail to teach a plasma process to decompose the PFC.

The admitted prior art Fig. 4.1 teaches an apparatus and a method of decomposing used PFC from a low pressure chamber 2, wherein a plasma is used to decompose the PFC.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to used the plasma source as taught by Fig. 4.1 instead of the incinerator as an art recognized equivalent means for the same purpose of decomposing used PFC mixed with oxygen.

Claims 1, 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji (US Patent No. 5,569,810) in view of Uchiyama (US Patent No. 5,439,568).

Tsuji teaches an apparatus (Fig. 5) and a method of using the same, wherein halogenated compound discharge from a dry etching apparatus (low pressure chamber) is mixed with a *hydrocarbon* like ethane in a reaction tube 61, then the mixed gas is excited into a plasma state to co-polymerize the gaseous mixture. A solid co-polymer of halogenated hydrocarbon is accumulated in the tube 61 or on a fixation member 14 (abstract, and column member 14 (abstract, and column 6, lines 8-51).

Tsuji fails to teach the halogenated gases discharged from the etching chamber being brought into atmospheric pressure through a vacuum pump.

Uchiyama teaches an apparatus (Fig. 3) and a method of using the same, wherein ozone layer depleting substrates such as PFC compounds are mixed with argon and acetone and the mixture is introduced into an atmospheric pressure glow discharge in order to decompose the substances and wherein the decomposed products are absorbed in water (abstract; column 1, line 60 through column 2, line 24; column 3, lines 15-24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the plasma reactor as taught by Uchiyama in the apparatus of Tsuji in order to absorb and neutralize the resulting decomposition acidic products in water.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Anand et al (US Patent No. 5,013,338) teach a plasma-assisted polymerization apparatus (Fig. 1) and method of using the same; and

Raoux et al (US Patent No. 6,045,618) teach a vacuum line cleaning apparatus including a plasma source which is disposed between a processing chamber and an exhaust pump.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parviz Hassanzadeh whose telephone number is (703)308-2050. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703)308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

P. Hassanzadeh
Parviz Hassanzadeh
Examiner
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May 23, 2003